

What is claimed is:

1. A surgical drill chuck comprising:

a main body of elongated cylindrical construction having a first distal end and a second distal end;

5        said first distal end having a first radiused body corner interconnecting a front end surface and a circumferential side surface, and said second distal end having a second radiused body corner interconnecting a rear end surface to said circumferential side surface so that said first and second distal ends are rounded to prevent damage to a surgical latex glove;

10        a plurality of movable jaws carried by said main body having a projecting end for extending outward from said front end surface of said main body;

      said projecting end including a radiused jaw corner interconnecting a jaw end surface and a jaw side surface so that said projecting end is rounded to prevent damage to surgical latex glove;

15        a sleeve rotatably carried on said circumferential side surface of said main body operatively associated with said jaws for extending and retracting said jaws when said sleeve is rotated, said sleeve having a plurality of gear teeth circumferentially spaced around a first sleeve end for cooperating with a chuck key to rotate said sleeve;

20        each of said gear teeth including an outer tooth surface having a first tooth surface extending generally in a radial manner outward from said circumferential side surface of said main body, and a radiused tooth corner interconnecting said first

tooth surface to a circumferential sleeve side surface so that the outer surfaces of said gear teeth are rounded to prevent damage to a surgical latex glove; and

said main body, jaws, and sleeve being finished to provide dull rounded edges at the intersections of adjacent surfaces;

5       whereby a surgical drill chuck is provided with smooth rounded surfaces and edges to prevent snagging, tearing or puncturing surgical latex gloves while handling the chuck during surgical operations.

2.       The surgical drill chuck of claim 1 wherein said first radiused body corner integrally merges into a coplanar arrangement with said front end surface and  
10       said circumferential side surface so that no sharp edges are provided around the circumference of said main body at said first distal end.

3.       The surgical drill chuck of claim 1 wherein said second radiused body corner integrally merges into a coplanar arrangement with said rear end surface and  
15       said circumferential side surface so that no sharp edges are provided around the circumference of said main body at said second distal end.

4.       The surgical drill chuck of claim 1 wherein said radiused jaw corner integrally merges into a coplanar arrangement with said jaw end surface and said jaw side surface so that no sharp edges are provided on said projecting end.

5.       The surgical drill chuck of claim 1 wherein said radiused tooth corner  
20       integrally merges into a coplanar arrangement with said first tooth surface and said circumferential sleeve side surface so that no sharp edges are provided on said outer tooth surface of said gear teeth.

6. The surgical drill chuck of claim 1 wherein said main body, jaws, and sleeve are finished through an abrasive bead blasting process which removes all burs formed during milling and rounds off all edges to prevent damaging a surgical latex glove during handling and use.

5 7. The surgical drill chuck of claim 6 wherein said main body, jaws, and sleeve have a matte finish formed by said abrasive bead blasting process to reduce glare.

8. The surgical drill chuck of claim 1 wherein said sleeve includes a second sleeve end; said second sleeve end including a radiused sleeve corner  
10 interconnecting said circumferential sleeve side surface to a bottom sleeve surface so that no sharp edge is provided on said sleeve.

9. The surgical drill chuck of claim 8 wherein said radiused sleeve corner integrally merges into a coplanar arrangement with said circumferential sleeve side surface and said bottom sleeve surface so that no sharp edge is provided on said  
15 second sleeve end.

10. The surgical drill chuck of claim 1 including a spacer carried at said second distal end of said main body for spacing said main body and sleeve away from a front operating end of a drill; said spacer having radiused spacer corners so that no sharp edges are provided that may damage a latex glove during handling.

20 11. A surgical drill chuck comprising:

a main body of elongated cylindrical construction having intersecting main body end and main body side surfaces;

a plurality of movable jaws of elongated cylindrical construction carried by said main body having intersecting jaw end and jaw side surfaces;

a sleeve of elongated cylindrical construction carried circumferentially on said main body being operatively associated with said jaws for extending and retracting  
5 said jaws when said sleeve is rotated, said sleeve having intersecting sleeve end and sleeve side surfaces; and,

radiused corners provided at the intersection of said main body end and main body side surfaces, said jaw end and jaw side surfaces, and said sleeve end and sleeve side surfaces so that a surgical drill chuck is provided with no sharp edges at  
10 intersecting end and side surfaces to prevent snagging, tearing or puncturing surgical latex gloves while handling the chuck during surgical operations.

12. The surgical drill chuck of claim 1 wherein said main body, jaws, and sleeve are finished so that all intersecting surface are provided with smooth dull rounded edges.

15 13. The surgical drill chuck of claim 1 wherein said main body, jaws, and sleeve are finished through an abrasive bead blasting process which removes all burs formed during milling and rounds off and dulls all edges to prevent damaging a surgical latex glove during handling and use.

14. The surgical drill chuck of claim 13 wherein said main body, jaws, and  
20 sleeve have a matte finish formed by said abrasive bead blasting process to reduce glare.

15. A method of providing a surgical drill chuck comprising the steps of:  
providing a main body of elongated cylindrical construction;

milling said main body to include radiused corners interconnecting main body end and main body side surfaces;

providing a plurality of movable jaws of elongated cylindrical construction carried by said main body;

5       milling said jaws to include radiused corners interconnecting jaw end and jaw side surfaces;

providing a sleeve of elongated cylindrical construction carried circumferentially on said main body being operatively associated with said jaws for extending and retracting said jaws when said sleeve is rotated;

10       milling said sleeve to include radiused corners interconnecting sleeve end and sleeve side surfaces;

milling said sleeve to include a plurality of gear teeth circumferentially spaced around a first radiused corner of said sleeve so that each of said gear teeth have a rounder outer tooth surface; and,

15       finishing said main body, jaws, and sleeve so that all intersecting surfaces of said main body, jaws, and sleeve are provided with smooth dull rounded edges to prevent snagging, tearing, or puncturing a surgical latex glove during handling.

16.    The method of claim 15 including the step of finishing said main body, jaws, and sleeve through an abrasive bead blasting process to remove all burs  
20    formed during milling and rounds off and dulls all edges.

17.    The method of claim 16 including the step of bead blasting said main body, jaws, and sleeve to provide a matte finish that reduces glare on the main body, jaws, and sleeve under bright operating room lights.